

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A trolley wheel assembly for a conveyor trolley comprising:
a hub portion;
a wheel portion rotatably positioned around said hub portion; and
at least one sliding member positioned between said wheel portion and said hub
5 portion, said sliding member defining at least one mating surface for mating with a generally
correspondingly formed mating surface of at least one of said wheel portion and said hub
portion, said mating surface of said sliding member defining a radial projection at least
substantially circumferentially around said sliding member, said radial projection slidably
mating with said generally correspondingly formed mating surface of said at least one of said
10 wheel portion and said hub portion to facilitate rotation of said wheel portion about said hub
portion.
2. The trolley wheel assembly of claim 1, wherein said radial projection comprises a
longitudinally curved radial projection which mates with a correspondingly curved mating
surface of said at least one of said wheel portion and said hub portion.
3. The trolley wheel assembly of claim 1, wherein said radial projection projects radially
outward, said wheel portion having said correspondingly formed mating surface.
4. The trolley wheel assembly of claim 1, wherein said radial projection projects radially
inward, said hub portion having said correspondingly formed mating surface.
5. The trolley wheel assembly of claim 1, wherein said radial projection of said sliding
member projects radially inward and radially outward, said correspondingly formed mating
surface comprising correspondingly formed mating surfaces defined at said wheel portion
and at said hub portion.
6. The trolley wheel assembly of claim 1, wherein said sliding member and said at least
one of said wheel portion and said hub portion are correspondingly formed to maintain axial
alignment of said sliding member and said at least one of said wheel portion and said hub
portion.

7. The trolley wheel assembly of claim 1, wherein said at least one of said wheel portion and said hub portion comprises at least one insert portion, said at least one insert portion defining said correspondingly formed mating surface of said at least one of said wheel portion and said hub portion.
8. The trolley wheel assembly of claim 7, wherein one of said sliding member and said at least one insert member comprise a polymeric material.
9. The trolley wheel assembly of claim 8, wherein the other of said at least one of said sliding member and said at least one insert member comprises a metallic material having a low friction coating thereon.
10. The trolley wheel assembly of claim 7, wherein said sliding member and said at least one insert member are correspondingly formed to maintain axial alignment of said sliding member and said at least one insert member and of said wheel portion and said hub portion.
11. The trolley wheel assembly of claim 7, wherein said at least one insert comprises two opposite end insert portions, said two end insert portions together defining said correspondingly formed mating surface.
12. The trolley wheel assembly of claim 7, wherein said wheel portion comprises at least one wheel insert portion and said hub portion comprises at least one hub insert portion, said at least one wheel insert portion defining an outer correspondingly formed mating surface and said at least one hub insert portion defining an inner correspondingly formed mating surface.
13. The trolley wheel assembly of claim 1, wherein said at least one sliding member comprises at least one of a metallic material, a polymeric material, an engineered thermoplastic material, a ceramic material and a fluorocarbon material.
14. A trolley wheel assembly for a conveyor trolley comprising:
 - a hub portion;
 - a wheel portion rotatably positioned around said hub portion; and

at least one sliding member positioned between said wheel portion and said hub
5 portion, said at least one sliding member comprising at least one ring-shaped portion having
an uneven first mating surface between said wheel portion and said hub portion, said at least
one sliding member being positioned between said wheel portion and said hub portion and
said uneven first mating surface slidably engaging a generally correspondingly formed
uneven second mating surface of at least one of said hub portion, said wheel portion and
10 another sliding member.

15. The trolley wheel assembly of claim 14, wherein said at least one sliding member
comprises at least one polymeric sliding member.

16. The trolley wheel assembly of claim 15, wherein said at least one polymeric sliding
member comprises an engineered thermoplastic material which provides a low coefficient of
friction between said at least one sliding member and said at least one of said hub portion,
said wheel portion and another sliding member.

17. The trolley wheel assembly of claim 15, wherein said at least one of said hub portion,
said wheel portion and another sliding member comprises another sliding member, said other
sliding member comprising a metallic sliding member positioned between said at least one
polymeric sliding member and at least one of said wheel portion and said hub portion.

18. The trolley wheel assembly of claim 17, wherein said metallic sliding member is
coated with a low coefficient of friction or slick coating to enhance sliding movement of said
metallic sliding member relative to said at least one polymeric sliding member.

19. The trolley wheel assembly of claim 14, wherein said at least one sliding member
comprises at least one of a metallic material, a polymeric material, an engineered
thermoplastic material, a ceramic material and a fluorocarbon material.

20. The trolley wheel assembly of claim 14, wherein said at least one of said hub portion,
said wheel portion and another sliding member comprises another sliding member.

21. The trolley wheel assembly of claim 14, wherein said at least one sliding member
comprises a metallic portion and said other sliding member comprises a polymeric portion,

said metallic portion slidably engaging said polymeric portion as said wheel portion rotates about said hub portion.

22. The trolley wheel assembly of claim 21, wherein said polymeric portion and said metallic portion are correspondingly formed to maintain axial alignment of said polymeric portion and said metallic portion and of said wheel portion and said hub portion.

23. The trolley wheel assembly of claim 21, wherein said metallic portion is coated with a low coefficient of friction or slick coating to enhance sliding movement of said metallic portion relative to said polymeric portion.

24. The trolley wheel assembly of claim 21, wherein said polymeric portion comprises an inner polymeric portion and an outer polymeric portion, whereby said inner polymeric portion is positioned adjacent to and in engagement with said hub portion, while said outer polymeric portion is positioned adjacent to and in engagement with said wheel portion, said
5 metallic portion being generally sandwiched between said inner and outer polymeric portions.

25. The trolley wheel assembly of claim 24, wherein said metallic portion comprises a metallic ring having said uneven first mating surface and being positioned between said inner polymeric portion and said outer polymeric portion and in slidable engagement with at least one of said inner and outer polymeric portions.

26. The trolley wheel assembly of claim 21, wherein said polymeric portion is positioned adjacent to said hub portion and said metallic portion is positioned adjacent to said wheel portion and in slidable engagement with said polymeric portion to facilitate rotation of said wheel portion about said hub portion.

27. The trolley wheel assembly of claim 21, wherein said metallic portion is positioned adjacent to said hub portion and said polymeric portion is positioned adjacent to said wheel portion and in slidable engagement with said metallic portion to facilitate rotation of said wheel portion about said hub portion.

28. A trolley wheel assembly for a conveyor trolley comprising:
a hub portion;
a wheel portion rotatably positioned around said hub portion; and
a sliding assembly positioned between said wheel portion and said hub portion, said
5 sliding assembly providing for rotation of said wheel portion relative to said hub portion, said
sliding assembly comprising first and second sliding members having a sliding interface, said
first and second sliding members being generally correspondingly formed at said sliding
interface and defining generally corresponding radial projections at said sliding interface to
limit axial movement between said first and second sliding members, said first and second
10 sliding members slidably engaging one another at said sliding interface.

29. The trolley wheel assembly of claim 28, wherein said first sliding member comprises
a polymeric portion and said second sliding member comprises a metallic portion.

30. The trolley wheel assembly of claim 29, wherein said second sliding member is
coated with a low coefficient of friction or slick coating to enhance sliding movement
between said first and second sliding members.

31. The trolley wheel assembly of claim 28, wherein said first sliding member is
positioned adjacent to and in engagement with one of said hub portion and said wheel
portion, said trolley wheel assembly comprising a third sliding member positioned adjacent to
and in engagement with the other of said hub portion and said wheel portion, said second
5 sliding member being positioned between said first and third sliding members.

32. The trolley wheel assembly of claim 31, wherein said second sliding member
comprises a ring-shaped member positioned between said first and third sliding members and
in slidable engagement with at least one of said first and third sliding members.

33. The trolley wheel assembly of claim 32, wherein said ring-shaped member comprises
a generally toroidal-shaped ring.

34. The trolley wheel assembly of claim 28, wherein said first sliding member comprises
a two piece member positioned at one of said wheel portion and said hub portion, said two
piece member comprising opposite end members positioned toward opposite axial ends of

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said wheel assembly, said opposite end members and said second sliding member
5 cooperating to define said sliding interface.

35. The trolley wheel assembly of claim 28, wherein said first sliding member is positioned adjacent to said hub portion and said second sliding member is positioned adjacent to said wheel portion.

36. The trolley wheel assembly of claim 35, wherein said first sliding member is generally affixed to said hub portion and said second sliding member is generally affixed to said wheel portion.

37. The trolley wheel assembly of claim 28, wherein said first sliding member comprises at least one of a metallic material, a polymeric material, an engineered thermoplastic material, a fluorocarbon material and a ceramic material.

38. The trolley wheel assembly of claim 28, wherein said second sliding member comprises at least one of a metallic material, a polymeric material, an engineered thermoplastic material, a fluorocarbon material and a ceramic material.